

W. WEBER.
MECHANISM FOR SECURING RAILS TO TIES.
APPLICATION FILED FEB. 7, 1910.

955,233.

Patented Apr. 19, 1910.

2 SHEETS—SHEET 1.

Fig. 1

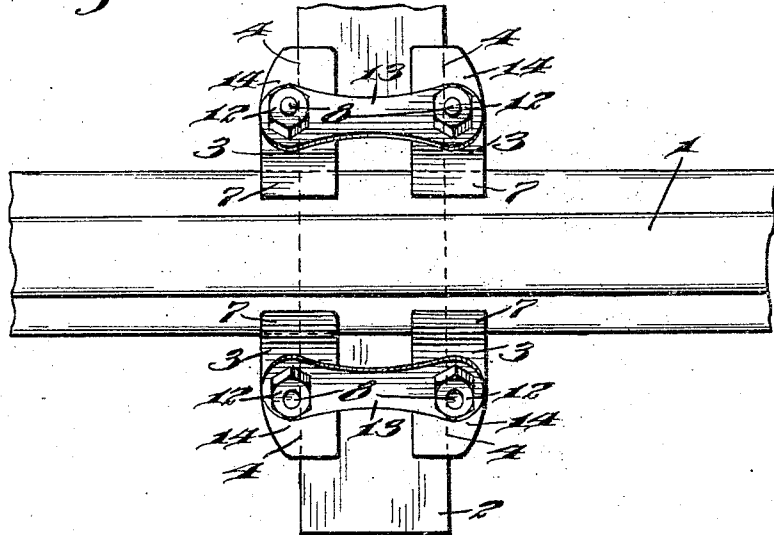


Fig. 2

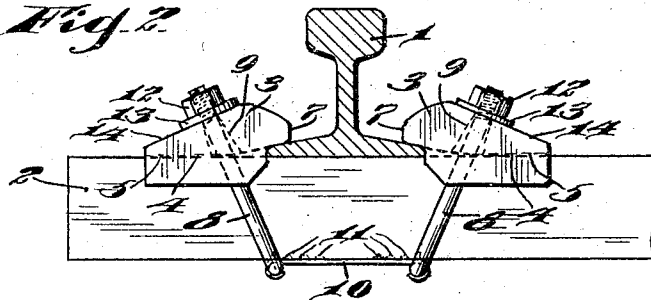
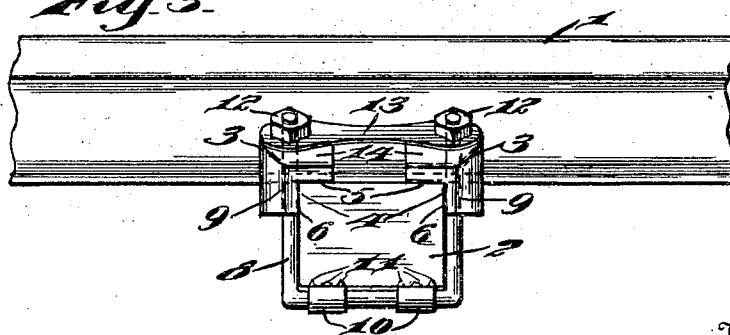


Fig. 3



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2 SHEETS—SHEET 2.

Fig. 4.

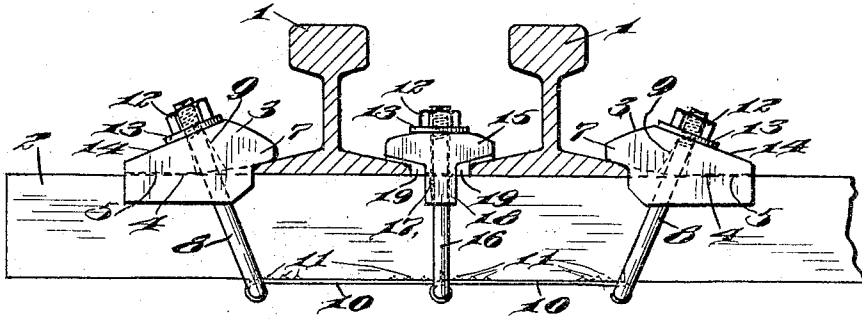


Fig. 5.

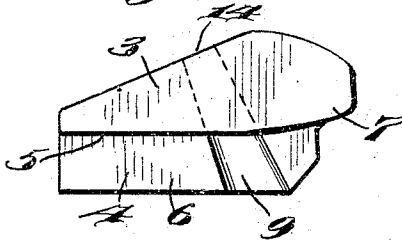


Fig. 6.

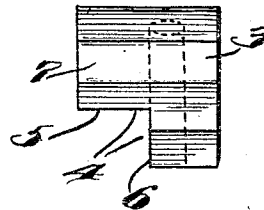


Fig. 7.

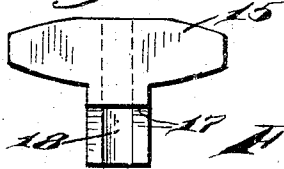


Fig. 8.

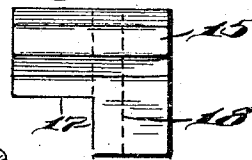


Fig. 9.

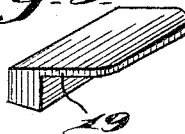


Fig. 10.



Fig. 11.



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UNITED STATES PATENT OFFICE.

WILLIAM WEBER, OF ALLENTOWN, PENNSYLVANIA.

MECHANISM FOR SECURING RAILS TO TIES.

955,233.

Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed February 7, 1910. Serial No. 542,474.

To all whom it may concern:

Be it known that I, WILLIAM WEBER, a citizen of the United States, residing at Allentown, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Mechanism for Securing Rails to Ties, of which the following is a specification.

My invention relates to improvements in mechanism for securing rails to ties, the object of the invention being to provide rail securing devices which will most effectually secure the rails on the ties and which mechanism is adapted for use either with a wooden, concrete or other tie, and secures the rail without puncturing the tie.

It is well known that as ties are now commonly secured to rails by means of the ordinary spike, that the water finds its way into the tie where the spike is driven, rots the tie, renders the attachment an insecure one, causes a great many accidents, and shortens the life of the tie. To overcome these objections, and to provide a securing device which will be comparatively cheap to manufacture, strong and durable in use, and one which clamps around the tie and clamps the base flanges of the rails on the tie, my invention was devised and will now be described in detail.

With these and other objects in view, the invention consists in certain novel features of construction, and combinations and arrangements of parts as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a fragmentary plan view illustrating my improvements. Fig. 2, is a view in section through the rail, taken at right angles to Fig. 1. Fig. 3, is an end view of Fig. 1. Fig. 4, is a view similar to Fig. 2, but showing my improvements when employed, to secure two rails in close proximity to each other. Fig. 5, is an enlarged view in side elevation of one of the securing blocks 3. Fig. 6, is an end view of Fig. 5. Fig. 7, is an enlarged view of the center block 15. Fig. 8, is an end view of Fig. 7. Fig. 9, is a detailed view of a spacing block 19. Fig. 10, is a view of one of the tie bands 10, and Fig. 11, is a view of one of the links 13.

1 represents an ordinary rail supported upon a tie 2. This tie may be made of concrete, wood or other suitable material, and is preferably rectangular in cross section as

is the ordinary tie. To secure the rail on the tie, I employ four blocks 3, two of these blocks being disposed at one side of the rail and two at the other. One of these blocks 3, is shown in detail in Figs. 5, and 6, and by reference to these figures, it will be seen that the block has a right angular recess 4, in its lower edge which provides a shoulder 5, adapted to be supported on the top of the tie, and a wall 6, adapted to engage the side of the tie. In other words, this recess 4, enables the block 3, to be positioned over the corner or edge of the tie and the block is provided with a forwardly projecting lip 7, adapted to engage over the base flange of the rail, and it will be noted that this tongue portion 7, on its lower face is inclined or beveled so that when downward pressure is applied to the block, it will securely clamp the base flange onto the tie. To secure these blocks 3, in operative position, I employ two U-bolts 8, which are of a size to straddle the tie with their ends projecting through openings 9, in blocks 3, and screw threaded as shown. The intermediate portions of bolts 8, at the bottom of the rail are connected by metal straps 10. These straps are curved at their ends so as to secure the strap to the bolts and at suitable points upon the upper surface of these straps, they are roughened in any approved manner as shown at 11, so as to firmly engage the under face of the tie and prevent any possibility of the bolts, and the other parts of the securing devices sliding longitudinally of the tie.

It will be noted that in normal position, bolts 8, are disposed at an incline and the openings 9, in the blocks are at an angle to the horizontal, so that when nuts 12, are screwed downward on the upper ends of the bolts above blocks 3, the tendency will not only be to bind the blocks on the ties, but to draw the blocks toward each other, and securely clamp the rail between the blocks as well as down upon the tie.

To prevent any possibility of the blocks moving laterally off of the ties, I employ links 13, which consist of metal straps having openings in their ends to receive the ends of bolts 8. These links 13, are interposed between the nuts 12, and the beveled or inclined upper face 14, of blocks 3, so that the blocks have no lateral tension whatever.

When two rails are in proximity with each other, as for example at switches, I prefer-

ably employ a construction as shown at Fig. 4. In this construction between the blocks 3, and their bolts 8, I provide an additional block 15, which is disposed between the two rails 1, and is of general T-shape so as to engage over the adjacent base flanges of both rails 1. I of course employ two of these blocks, one at each side of the tie, and the bolt 16, on which they are secured, is in a substantially vertical position, and I employ two metal straps 10, connecting this bolt 16 with the bolts 8. This block 15, as shown in Figs. 7 and 8 has a right angle recess 17, to engage over the edge of the tie, and is provided with a bolt receiving opening 18. If the block 15, does not properly engage the base flanges, spacing blocks 19, are employed. These blocks 19, as shown in Fig. 9, conform to the general shape of the base flange of the rail, and serve to bridge any space between the block and the base flange.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. The combination with a tie and a rail thereon, of four blocks two of which are positioned at one side of the rail, and two at the other, each of these blocks having a right angular recess to engage over the edge of the tie, a tongue on each block having an inclined lower face and engaging over the

base flange of the rail and each block having an opening therethrough, two U-bolts straddling the tie, the members of said U-bolts projecting through the openings in the blocks, links on the upper ends of said U-bolts and nuts on the U-bolts above the links.

2. The combination with a tie and a rail thereon, of four blocks two of which are positioned at one side of the rail, and two at the other, each of these blocks having a right angular recess to engage over the edge of the tie, a tongue on each block having an inclined lower face and engaging over the base flange of the rail and each block having an opening therethrough, two U-bolts straddling the tie, the members of said U-bolts projecting through the openings in the blocks, links on the upper ends of said U-bolts and nuts on the U-bolts above the links, said U-bolts inclined to each other, and metal straps connecting said U-bolts below the tie, and means for preventing movement of said straps on the tie.

3. The combination with a tie and two rails thereon, in close proximity to each other, of T-shaped blocks engaging the base flanges of both adjacent rails, blocks engaging the outer flanges of the rails, U-bolts straddling the tie, projecting through the said blocks, nuts on said bolts above the blocks and metal straps connecting the U-bolts at the bottom of the tie.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM WEBER.

Witnesses:

HERBERT M. BACHMAN,
J. F. BRUCKER.